Nishi Sharma

nishisharmaanil@gmail.com | +91 8077394388 | Github: **nishisharma311** | LinkedIn: **nishisharmaanil**

EXPERIENCE

BORGWARNER IPEC | Associate Software Engineer

July 2023 – Present | Bengaluru, Karnataka

- Responsible for the development and testing of real-time Application Software for Low Level Drivers, focusing on high reliability, performance, in compliance with AUTOSAR and ISO 26262 functional safety standards.
- Contributed to process improvements and documentation that enabled the project to achieve ASPICE Level 2 compliance, ensuring structured software development and traceability
- Developed automation script for MISRA C/C++ static code analysis, reducing manual effort and development time by 20%.
- Integrated factory test software and MCAL drivers with AUTOSAR BSW.
- Collaborated with CoC and CoE teams to support platform-level integration and testing of the Park Lock System.
- Hands on experience in testing with HW boards using tools like JTAG, Trace32 debuggers and PCAN.
- Participated annually in Tech Day Events with cross-functional teams to foster innovation and collaboration; received Spark Award for paper presentation and contributions to the Variable Gate Drive Strength(VGR) feature.

MCCAIN INDIA | Electrical Intern

May 2022 – July 2022 | Mehsana, Gujarat

- Worked on reactive and proactive maintenance strategies for reducing and optimizing preventive maintenance time.
- Research work on Industrial Automation, SCADA and PLC

PROJECTS

SMART BATTERY MONITORING SYSTEM | Developed Simulink Model for Battery State Estimation

May 2022-May 2023| SVNIT, Surat| Link: BMS

- Implemented Simulink Model for Battery SOC and SOH estimation using different algorithms like Coulomb Counting and Kalman Filters.
- Designed and integrated the firmware that runs on Arduino Uno and sensors like wifi module, current and temperature sensor using UART serial communication.
- Worked on User friendly GUI using Thignspeak(IOT) that displays real-time battery data and charts in your mobile application.

UAV CONTROL SYSTEM | Designed Simulink Model

Nov 2022 - Aug 2023| Drishti SVNIT, Surat| Link: Github

- Designed UAV control system on MATLAB Simulink from scratch using UAV Toolbox. Simulated the mathematical model of UAV and estimated the control system parameters using PID algorithm.

LINE FOLLOWER BOT | Embedded C

Nov 2019| Drishti SVNIT, Surat

- Designed an Autonomous line following bot using infrared sensors and ATMEGA 32 microcontroller.

EDUCATION

SVNIT, SURAT

BTech. Electrical Engineering, with Minors in ECE

May 2023 | Surat, Gujarat

Cum. CGPA: 9.21 / 10.0

SKILLS

Languages:
Embedded C • C/C++ • Python • Assembly

Model-Based Design:
MATLAB Simulink

Debugging Tools:
TRACE32 • Lauterbach • MS Visual Studio • ASTREE

Standards and Compliance
ISO 26262 • AUTOSAR • ASPICE • MISRA C/C++ • SDLC

Microcontrollers:
Infineon AURIX TC37xx • STM32 • Arduino (AVR/ARM)

Protocols:
CAN • SPI • I2C • UART

ALM Tools:
JIRA • Polarion

Others:
Git/Bitbucket • RTOS
CI/CD • Automation
Multithreading • Memory Management

COURSEWORK

- **Data Structure and Algorithm**,LeetCode
- **The Ardrino Platform and C Programming**, Coursera
- **Introduction to the Internet of Things and Embedded Systems**, Coursera
- **Motor Control and Power Electronics**
- **Computer Architecture**

SOCIETIES

- **Drishti**, SVNIT
- **DSC**, NIT SURAT
- **EES**, NIT SURAT